

**JURISDICTIONAL DELINEATION  
APN 125-101-02  
Community of Coto de Caza  
Orange County, California  
Canada Gobernadora Quadrangle  
Township 7S, Range 7W, portions of Sections 1 and 2**



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CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: \_\_\_\_\_ Signed: \_\_\_\_\_

## SUMMARY

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This report contains the results of a 2010 wetland/streambed delineation conducted for APN: 125-101-02 known as the Coto de Caza View Estates property. The project site is in the Coto de Caza community of Orange County, California. Specifically, it is located east of Vista del Verde, west of Starr Ranch, south of what would be the continuation of San Miguel, and north of what would be the continuation of Atherton Drive.

The site consists of seven vegetation communities, characterized as C coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. The project site has been subject to anthropogenic disturbances.

Streambed/wetland delineation studies found state jurisdictional areas on the proposed project site. Final authority over the area rests with the appropriate agencies.

The proposed project has 0.11 acres of federal jurisdiction, and 2.11 acres of state jurisdiction. The proposed project impacts are 0.01 acre of potential federal jurisdiction for waters of the U.S. and 0.89 acre of state jurisdiction. There are no wetlands on the project site. Federal impacts are

The area is under the jurisdiction of the U.S. Army Corps of Engineers, California Department of Fish and Game, and California Regional Water Quality Control Board. Permits/Agreements for activities within the streambed will be required by the California Department of Fish and Game, U. S. Army Corps of Engineers and California Regional Water Quality Control Board. Final authority over the area rests with the appropriate agencies.

## I. PROJECT AND PROPERTY DESCRIPTION

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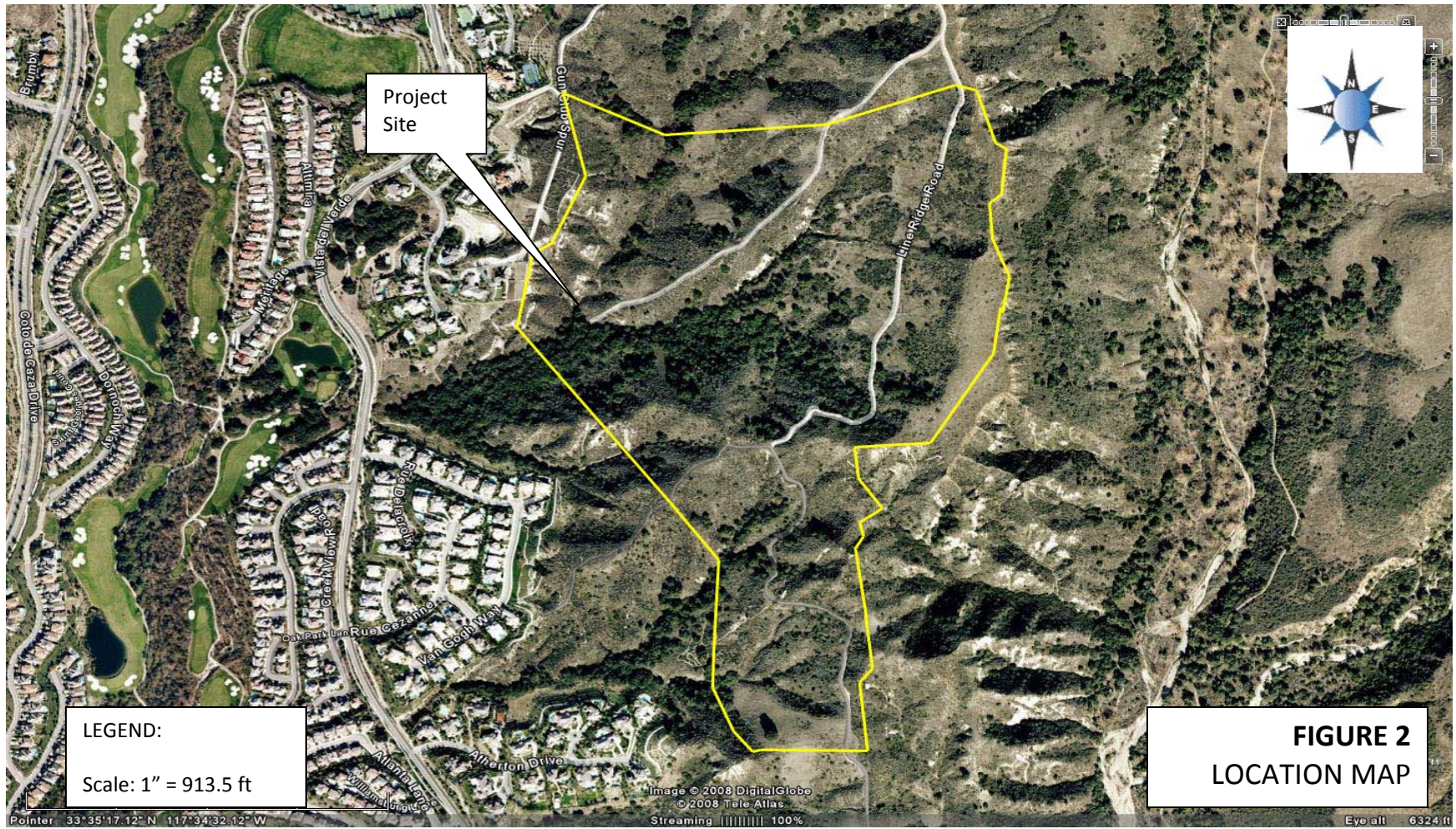
### PROJECT LOCATION

The site is located within San Bernardino Meridian in Sections 1 and 2, Township 7 South, and Range 7 West in Orange County, California (Figures 1, 2 and 3). This location is shown on the Canada Gobernadora, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Canada Gobernadora 1979); page 923 (blocks 2D, and 3D) of the current Orange County Street Guide and Directory (Thomas Brothers Maps Design 2007). The approximate center of the site is located at 33.3532.44°N, 117.3427.87°W.

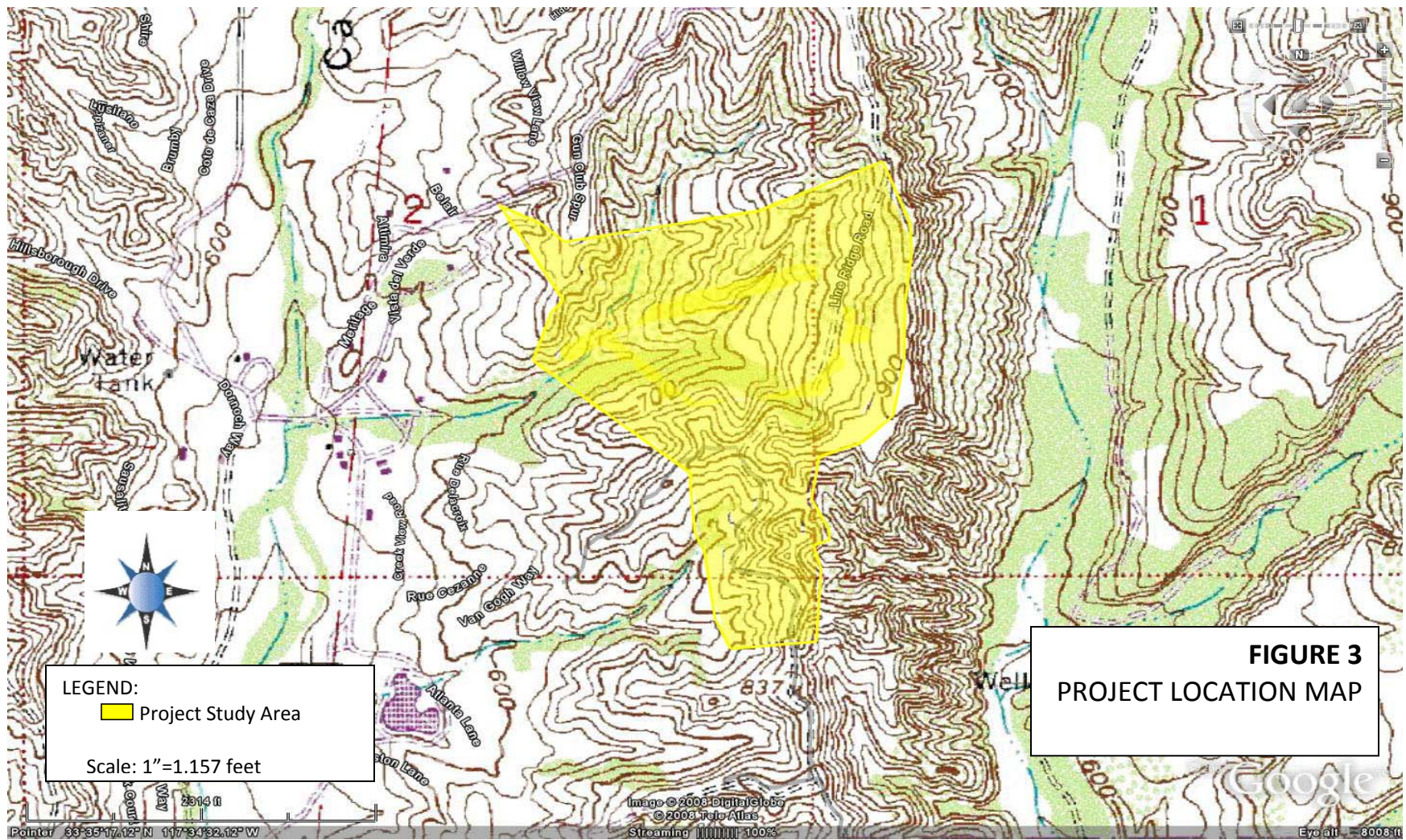












## **PROJECT DESCRIPTION**

### **Proposed Project Area**

Coto de Caza is an unincorporated area of Orange County, California, governed by the Orange County Board of Supervisors. Coto de Caza is a suburban planned community of about 4,000 homes, and one of Orange County's oldest and most expensive master planned communities. The project began in 1968, when it was envisioned as a hunting lodge, now the Coto de Caza Guest Lodges, and the community was completed in 2000. Around the town there are still undeveloped lots available for purchase as well as two 18-hole golf courses. Currently there are two club houses, one considered the "old club" and the other the "new club." The new club harbors the facilities between the golf courses and the tennis club. The old club, located in the residential area known as "the Village," once held tennis guru and teacher Vic Braden. The old club was also the home location for the Coto de Caza Youth Swim Team. The new Club, known as the Spa and Sports Club, recently added a two story spa and fitness club with state of the art exercising equipment.

The majority of the community is tract homes and semi-custom homes, with collections of customs on the outskirts off the main streets. Coto de Caza is twenty minutes from the Interstate 5 freeway and five minutes from the 241 toll road to Irvine and then Riverside County.

While some residents believe that "Coto de Caza" means "Preserve of the Hunt" in Portuguese, this is erroneous. The proper wording in Portuguese is "Couto de Caça". In actuality, "Coto de Caza" is Portuguese for "Reserve of Hunt" and implies that the reserve is private (Wikipedia).

### **Proposed Project Site**

The terrain of the proposed project site is marginally steep hills, valleys and drainage swells. The site is sloping generally down from east to west, depending on location in the landscape. The site occurs at elevations between 700 and 850 feet above mean sea level. The site is undeveloped, open space in the foothills of the Santa Ana Mountains. The site has been disturbed by anthropogenic disturbances including off-road vehicular use. Multiple dirt roads traverse the project site, impacting plant and animal habitat.

Land immediately west of the proposed project site contains single-family residences accompanied by many non-native ornamental landscape plants, especially invasive trees. Construction of new homes continues to the northwest and southwest. Land to the east is currently open space (Starr Ranch).



## Proposed Project Description

The proposed project site totals approximately 127 acres, of which a certain portion will be disturbed. The proposed residential project will consist of single-family residential lots, water quality basins, and open space areas. An internal network of streets and cul-de-sacs will provide access to the lots. Sewer, water, gas, electric, telephone, and cable television services will be extended onto the site from existing main lines.

## REGULATORY BACKGROUND

### Army Corps of Engineers

The ACOE typically regulates any drainage channel having at least intermittent flow as "waters of the U.S.". The ACOE jurisdiction over non-tidal waters of the US extends laterally to the ordinary high water mark (OHWM), but may extend beyond the OHWM to include any adjacent wetlands.

Federal jurisdictional areas were determined utilizing the 1987 Corps of Engineers Wetlands Delineation Manual<sup>1</sup>. Federal wetland determinations are based on three parameters: vegetation, soils and hydrologic characteristics of the area.

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
  - i. *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
  - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
  - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*

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<sup>1</sup> United States Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. 90 pps.

(iv) *All impoundments of waters otherwise defined as waters of the United States under the definition;*

(4) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*

(5) *The territorial seas;*

(6) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

(7) *Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

Note: Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM), which is defined at 33 CFR 328.3(e) as:

*...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987, the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:



- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands<sup>2</sup>);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year<sup>3</sup>.

These requirements may or may not apply to isolated, non-navigable waters (vernal pools) pursuant to a January 9, 2001 U.S. Supreme Court decision *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* [531 U.S. 159 (2001) (SWANCC)]. SWANCC eliminates CWA jurisdiction over isolated, intrastate, non-navigable waters where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross State lines in their migrations.

In accordance with the Rapanos Guidance memorandum, implementing the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (herein referred to simply as "Rapanos") dated June 5, 2007 the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency will continue to assert jurisdiction over traditional navigable waters (TNWs) and all wetlands adjacent to TNWs. Under the Supreme Court decision jurisdiction can be asserted over a water, including wetlands, that is not a TNW by meeting either of the following two standards:

- The first standard, based on the plurality opinion in the decision, recognizes regulatory jurisdiction over a water body that is not a TNW if that water body is "relatively permanent" (i.e., it flows year-round, or at least "seasonally," and over wetlands adjacent to such water bodies if the wetlands "directly abut" the water body (i.e., if the wetlands are not separated from the water body by an upland feature such as a berm, dike, or road). As a matter of policy, field staff will include, in the record, any available information that documents the existence of a significant nexus between a relatively permanent water body that is not perennial and a TNW.
- The second standard, for tributaries that are not relatively permanent, is based on the concurring opinion of Justice Anthony P. Kennedy, and requires a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" may be found where waters, including adjacent wetlands, affect the chemical, physical or biological

<sup>2</sup> Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

<sup>3</sup> For most of low-lying southern California, five percent of the growing season is equivalent to 18 days.

integrity of TNWs. Factors to be considered in the “significant nexus” evaluation includes:

- The flow characteristics and functions of the tributary itself in combination with the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of TNWs.
- The consideration of hydrologic factors including, but not limited to, the following:
  - Volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
  - Proximity to the traditional navigable water
  - Size of the watershed
  - Average annual rainfall
  - Average annual winter snow pack
- The consideration of ecologic factors including, but not limited to, the following:
  - The ability for tributaries to carry pollutants and flood waters to TNWs
  - The ability of a tributary to provide aquatic habitat that supports a traditional navigable water
  - The ability of wetlands to trap and filter pollutants or store flood waters
  - Maintenance of water quality

### **Arid Area Delineations**

With non-tidal waters, in the absence of adjacent wetlands, the extent of the Corps jurisdiction is defined by the "ordinary highwater mark". In 33 CFR Part 329.1, the "Ordinary Highwater Mark" for non-tidal rivers is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris (Department of Defense 1986). In general, the OHWM for a stream is usually determined through an examination of the recent physical evidence of surface flow in the stream channel. In dryland fluvial systems typical of the desert areas, the most common physical characteristics indicating the OHWM for a channel usually include, but are not limited to: a clear natural scour line impressed on the bank; recent bank erosion; destruction



of native terrestrial vegetation; and the presence of litter and debris. For many small desert wash systems, the presence of continuous well-developed upland vegetation in the stream channel is a good indicator that it only conveys surface flow during extremely large storm events and, as a result, would not usually constitute a jurisdictional water of the United States. However, the presence of native riparian species in a dry wash is usually a good indicator that the stream channel usually exhibits surface flow during both small and moderate storm events. Using available hydrologic information and reliable estimates for storm flows, Regulators and environmental consultants should ensure that the horizontal extent of Corps jurisdiction is consistent with reliable discharge data and/or estimated storm flows for the given fluvial system.<sup>4</sup>

### **California Department of Fish and Game**

CDFG jurisdictional areas are determined utilizing California Fish and Game Code Section 1602 which requires that general plans be submitted to the California Department of Fish and Game (Department) if the project will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the Department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the Department.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses should be treated by [CDFG] as natural waterways...

Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions.

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4 U.S. Department of the Army. 2001. Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest. 12 pps.

## California Regional Water Quality Control Board

Water Quality Certification<sup>5</sup> is required for discharges of dredged and fill materials. By federal law, every applicant for a federal permit or license for an activity which may result in a discharge into a water body must request state certification that the proposed activity will not violate state and federal water quality standards. Water quality standards include beneficial uses of water, water quality objectives and antidegradation policy.

Regional Water Quality Control Board (RWQCB) has jurisdiction over similar "Wetlands" and "Waters of the United States" under Section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne). Permitting of activities that would result in a discharge of soils, nutrients, chemicals, or other pollutants into Waters of the United States or adjacent wetlands, which would affect the water quality of those bodies and the area watershed, are regulated by the Board. The RWQCB also regulates discharge activities affecting Waters of the State as defined in Porter-Cologne. Isolated, non-navigable waters (e.g., vernal pools), are covered under Porter-Cologne. Statewide Waste Discharge requirements for dredged or fill discharges to waters deemed by the ACOE to be outside federal jurisdiction have been in effect since May 19, 2004.

## Southern Orange County Coordinated Planning Process (SOCCPP)

Currently, local, state, and federal agencies, in cooperation with local landowners, are engaged in coordinated land use and natural resource conservation planning efforts to address future economic development within a 91,000 acre portion of Southern Orange County. The three planning processes underway are: 1) an amendment to the County's General Plan and Zone Change for the Rancho Mission Viejo "Ranch Plan"; 2) development of a Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) for the San Juan Creek and San Mateo Creek watersheds; and 3) development of a South County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP).

The respective lead agencies and cooperating landowners involved with the development of these plans agree that a coordinated approach is the best method to address the sensitive biological, aquatic, and hydrological helpful hints of Southern Orange County. Although all of the lead agencies will coordinate the development and completion of the plans, each of the agencies will be required to prepare separate environmental decision documents for each plan (i.e., Environmental Impact Statements/Reports (EIS/EIR), in accordance with their respective legislative requirements and regulations (Orange County).

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<sup>5</sup> United States Environmental Protection Agency. 1977. Clean Water Act. 33 USC 1251 et seq.



## II. METHODS

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The starting point for this study was a field trip to the project site in May 2008, due to the length of time and change in circumstances (normal rainfall), a new delineation was completed in July 2010. For this study the "Routine Onsite Determination Method" data forms were used, onto which recorded information or otherwise compiled notes regarding the descriptive physical and biological attributes from the area. From a combination of field experience, references, assistance from others, and reconnaissance trips information resources were compiled from which the jurisdictional determinations have been made. Photographs were taken on each visit, some of which are included in this document. Field notes and photographs were arranged by date.

The routine approach was utilized on this project, with on-site determination based on dominant plant species, soil characteristics, and hydrologic characteristics of the area.

Data sources used:

- a. USGS quadrangle maps
- b. County Soil Surveys
- c. Aerial photos
- d. State list of hydric soils
- e. National Wetlands Inventory List of Plant Species that Occur in Wetlands (1988)
- f. Munsell Soil Charts

The following steps were performed:

1. Project area was identified and mapped on USGS quadrangle map.
2. Vegetation for the project area was summarized and identified utilizing transects and observation points.
3. Area soils were characterized and identified.
4. Hydrology data was gathered utilizing field hydrologic indicators and available data.

In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within these three parameters. Non-wetland waters of the U.S. are delineated based on the limits of the OHWM as determined by erosion, the deposition of vegetation or debris, and changes in the vegetation. RWQCB shares ACOE jurisdiction, unless isolated conditions are present. In the presence of isolated conditions, RWQCB takes jurisdiction from the OHWM and/or the 3—parameter wetland methodology utilized by the ACOE. CDFG takes jurisdiction defined to the top of the bank of the stream/channel or to the extreme limits of the adjacent riparian vegetation (drip line).

## **Vegetation**

Regional lists of hydrophytic vegetation (indicator species) for wetland habitats are available from the U.S. Fish and Wildlife Service (USFWS). Vegetation cover is estimated and ranked relative to their dominance or abundance. Plant species cumulatively contributing >50% of the total dominant coverage, plus those species that comprise >20% dominance are recorded on a wetland data sheet (see Appendix A, Wetland data Forms). Wetland indicator status is assigned to each species using the List of Plant Species that Occur in Wetlands (USFWS 1988). If >50% of the dominant species from all strata were considered Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation was considered to have been met. The following indicator plant status categories were used:

- Obligate Wetland (OBL): Plants that occur almost always (estimated >99%) in wetlands under natural conditions, but which may also occur rarely (estimated <1% in non-wetlands (i.e., cat-tails or pickleweed).
- Facultative Wetland (FACW): Plants that occur usually (estimated 67-99%) in wetlands, but also occur (estimated 1-33%) in non-wetlands (i.e., mulefat or willow).
- Facultative (FAC): Plants with similar likelihood (estimated 33-67%) of occurring in both wetlands and non-wetlands.
- Facultative Upland (FACU): Plants that occur sometimes (estimated 1-32%) in wetlands, but occur more often (estimated 67-99%) in non-wetlands.
- Obligate Upland (UPL): Plants that occur rarely (estimated <1%) in wetlands, but occur almost always (estimated >99%) in non-wetlands under natural conditions.

## **Hydrology**

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. In addition, indicators of wetlands or Riverine hydrology are recorded including the OHWM, drift lines, rack, debris, and sediment deposits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sandbars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

## **Soils**

Wetland or hydric soils are defined on the basis of the soil's physical characteristics resulting from oxygen availability in response to increasing or decreasing soil saturation. These characteristics are observed from a transect of soil pits. Soil pits are dug 16 inches along a transect within a drainage adjacent to vegetation. At each soil pit, soil texture and color are recorded in comparison with a Munsell Soil Chart (1994). The soil chart aids in designating the three color values of hue, value, and chroma. Additional indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low—chroma soils, or sulfuric odor are also recorded. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding, long enough during the growing season to develop anaerobic conditions in the upper 16 inches. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 16 inches of the soil profile.

### **Conditions Assessed from the Literature**

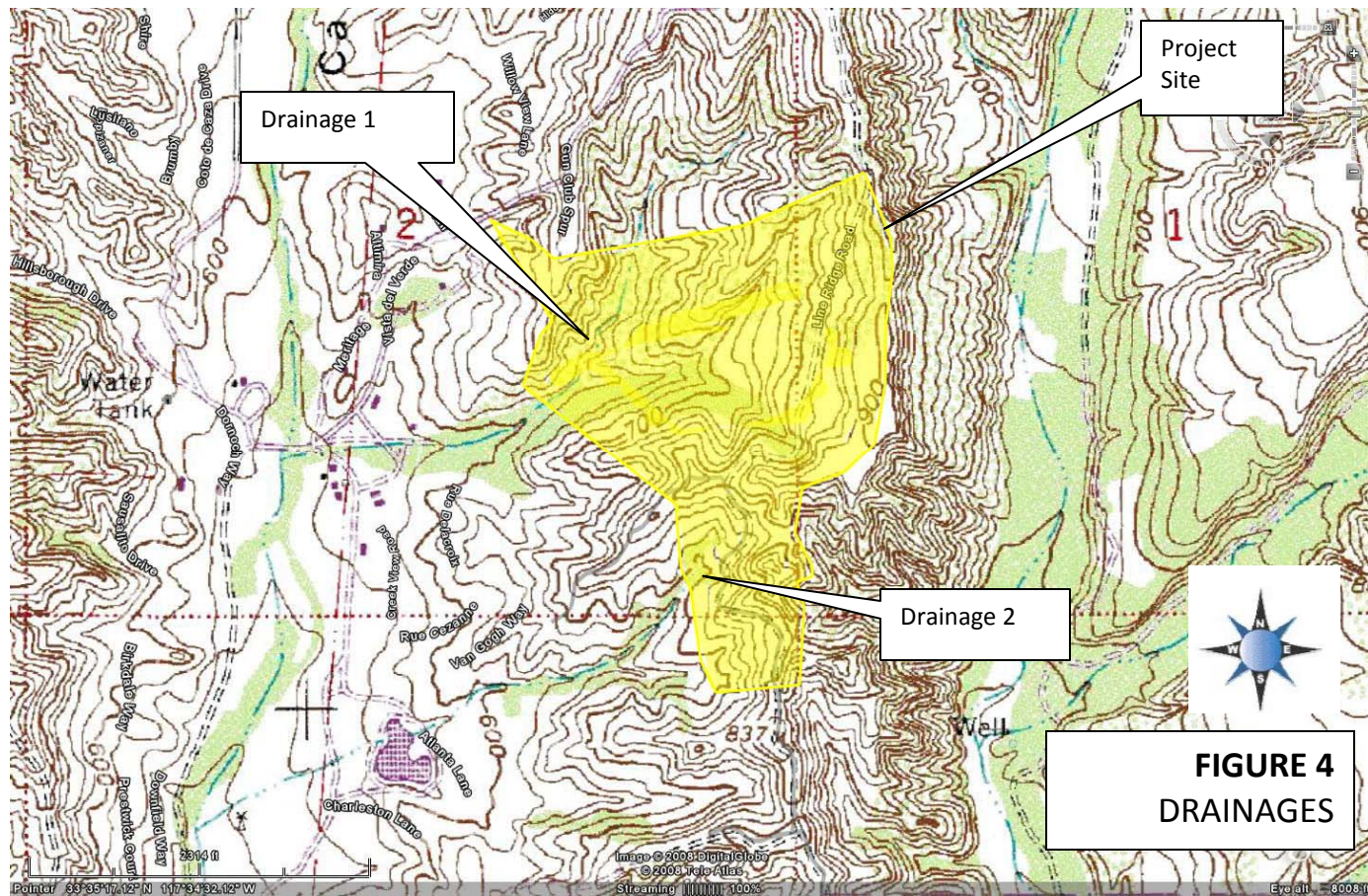
Prior to onsite fieldwork, USGS topographic maps [Canada Gobernadora 7.5' USGS topographic Quadrangle], National Resource Conservation Service Hydric Soils List for California (2010), Orange County GIS System, the Soil Survey for the Orange County and Western Part of Riverside County, California, and relevant literature (complete listing is found under References for this report).

USGS 7.5' Topographic Quadrangle-Canada Gobernadora, CA: The 127—acre project site is within an unincorporated portion of Orange County. The project site is at an elevation ranging from 700 and 850 feet above mean sea level. The site contains a blue-line drainage feature.

Recent Aerial Photography: Dirt roads and trails are abundant on the project site. No ponding or wetland appears on the project site. Coast live-oak woodland is abundant along the parameters of the drainage.

Soil Survey: The soils are Cienega-Anaheim-Soper association: Strongly sloping to very steep, somewhat excessively drained and well drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills.

Hydric Soils List of California: The National Resource Conservation Service Hydric Soils List for California (2008) was consulted to determine if onsite soils are considered hydric. There are no hydric soils listed for the area.





### III. RESULTS AND DISCUSSION

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#### DESCRIPTION OF SITE

#### TOPOGRAPHY

The project site consists of gently to steeply sloping terrain that has a general decrease in elevation from east to west. The average annual rainfall for the area ranges from 12-20 inches. The average annual temperature is 59-62 degrees, with 200-350 frost-free days.<sup>6</sup> The project site is in the Santa Ana mountain foothills. The western boundary of the site consists of urbanized Coto de Caza; to the east is open space (Starr Ranch). The area supports chaparral, oak woodlands, grasslands, and coastal sage scrub. The Santa Ana Mountains are floristically distinct from the San Bernardino and San Jacinto Mountains.

#### PLANT COMMUNITIES

The project site is comprised of coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. Residential areas consisting of medium density single family homes occur west of the project site. Both unnamed drainages drain into the residential area. In addition to the residential areas noted as Developed on the vegetation community map, disturbed areas also occur throughout the project site. Starr Ranch lies on the east side of the project site.

#### COASTAL SAGE SCRUB

Coastal sage scrub is represented by several major associations that occur discontinuously from the San Francisco Bay area south to El Rosario in Baja California, Mexico. Coastal sage scrub is dominated by a characteristic suite of low-statured, aromatic, drought- deciduous shrubs and subshrub species. Composition varies substantially depending on physical circumstances and the successional status of the vegetation community. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (e.g., *Salvia mellifera*, *Salvia apiana*) (Holland). Other common species include brittlebush (*Encelia farinosa*), lemonadeberry (*Rhus integrifolia*), sugarbush (*Rhus ovata*), Mexican elderberry (*Sambucus mexicana*), sweetbush (*Bebbia juncea*), boxthorn (*Lycium* spp.), prickly-pear (*Opuntia littoralis*), coastal cholla (*Opuntia prolifera*), tall prickly-pear (*Opuntia oricola*), and several species of live forever (*Dudleya*).

The more open nature of the canopy permits persistence of a diverse herbaceous component of forbs, grasses, and succulents in mature stands than usually is associated with chaparral. It often is mixed with chaparral and grassland communities and the distinct boundaries between each can sometimes be difficult to delineate (Draft NCCP).

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<sup>6</sup> United States Department of Agriculture Soil Conservation Service. 1978. Soil Survey of Orange County and Western Part of Riverside County, California. 149 pp., illus.

## ANNUAL (NON-NATIVE) GRASSLAND

Non-native grassland is characterized by a sparse to dense cover of annual grasses typically up to two feet tall, with many annual wildflowers also present in years with favorable rainfall. This vegetation community typically occurs on fine-textured soils that are moist or wet in the winter and very dry during summer and fall. Plant species present typically include wild oat (*Avena* spp.), bromes (*Bromus* spp.), tarweeds (*Centromadia* spp., *Deinandra* spp.), and filarees (*Erodium* spp.) (Holland 1986). In Orange County, annual grasslands often occur where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities. Annual grasslands in the project area are dominated by bromes (*Bromus madritensis*, *Bromus diandrus*, and *Bromus hordaceus*), wild oats (*Avena barbata*, *Avena fatua*), rat-tail fescue, barleys (*Hordeum* spp.) and Italian ryegrass. Annual forbs include tocalote, common fiddleneck (*Amsinckia menziesii*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), common catchfly, stickwort (*Spergularia arvensis*), miniature lupine (*Lupinus bicolor*), white-whorl lupine (*Lupinus densiflorus* var. *austocollum*), burclover (*Medicago polymorpha*), bristled clover (*Trifolium hirtum*), red-stemmed filaree, white-stemmed filaree (*Erodium moschatum*), and fluellin (*Kickxia elatine*).

## VALLEY NEEDLEGRASS GRASSLAND

Valley needlegrass grassland is a mid-height (to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer. Often intergrades with oak woodlands on moister, better drained sites (Holland). In the project area valley needlegrass grassland is determined when there is more than 10 percent cover of purple needlegrass (*Nassella pulchra*). It is associated with the annual grasses listed above, leafy bentgrass (*Agrostis pallens*), junegrass (*Koeleria macrantha*), cane bluestem (*Bothriochloa barboidis*), coast range melic (*Melica imperfecta*) and annual forbs such as common goldenstar (*Bloomeria crocea*), blue dicks, Cleveland's goldenstar (*Dodecatheon clevelandii*), smooth cat's-ear (*Hypochaeris glabra*), lilac mariposa lily (*Calochortus splendens*), many-stemmed dudleya (*Dudleya multicaulis*), blue-eyed grass (*Sisyrinchium bellum*) and rosin weed (*Calycadenia truncata*) (Draft NCCP).

## CHAMISE CHAPARRAL

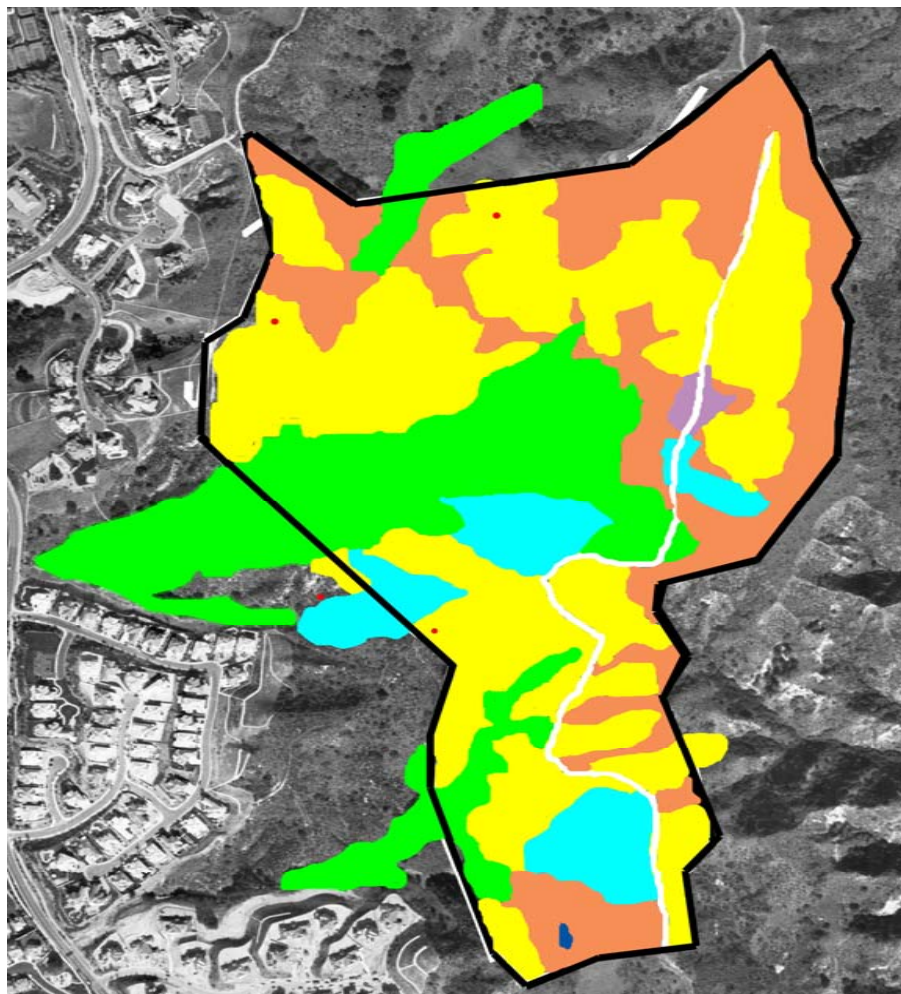
Chamise chaparral is a 1-3 meter tall chaparral overwhelmingly dominated by chamise. Associated species contribute little to cover. It is adapted to repeated fires by stump sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This chaparral is found on dry soils on xeric slopes and ridges. Some typical plant species include chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus dumosa*), sugar bush (*Rhus ovata*), white sage (*Salvia apiana*), and chaparral yucca (*Yucca whipplei*).

## COAST LIVE OAK WOODLAND

Coast Live Oak Woodland is typically found on north-facing slopes and shaded ravines below 4000 feet. This oak woodland is dominated by the Coast Live Oak (*Quercus agrifolia*), which is evergreen and reaches 10-25 meters in height. The shrub layer is poorly developed, but may include Toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes spp.*), laural sumac (*Rhus laurina*), or elderberry (*Sambucus mexicana*). The herb layer is continuous and dominated by brome grass (*Bromus diandrus*) and several other non-native species. Other typical species include California buckeye (*Aesculus californica*), coffee berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), and California laurel (*Umbellularia californica*).

## DISTURBED

The disturbed areas include all dirt roads located on the project site. Disturbed habitat refers to land that has been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. This area has no habitat value.



LEGEND:

- Annual grasslands
- Coastal sage scrub
- Coastal live oak woodland
- Valley needlegrass grassland
- Chaparral
- Gnatcatcher locations
- Quercus agrifolia hybrid
- White=Dirt road

**FIGURE 5**  
**VEGETATION MAP**





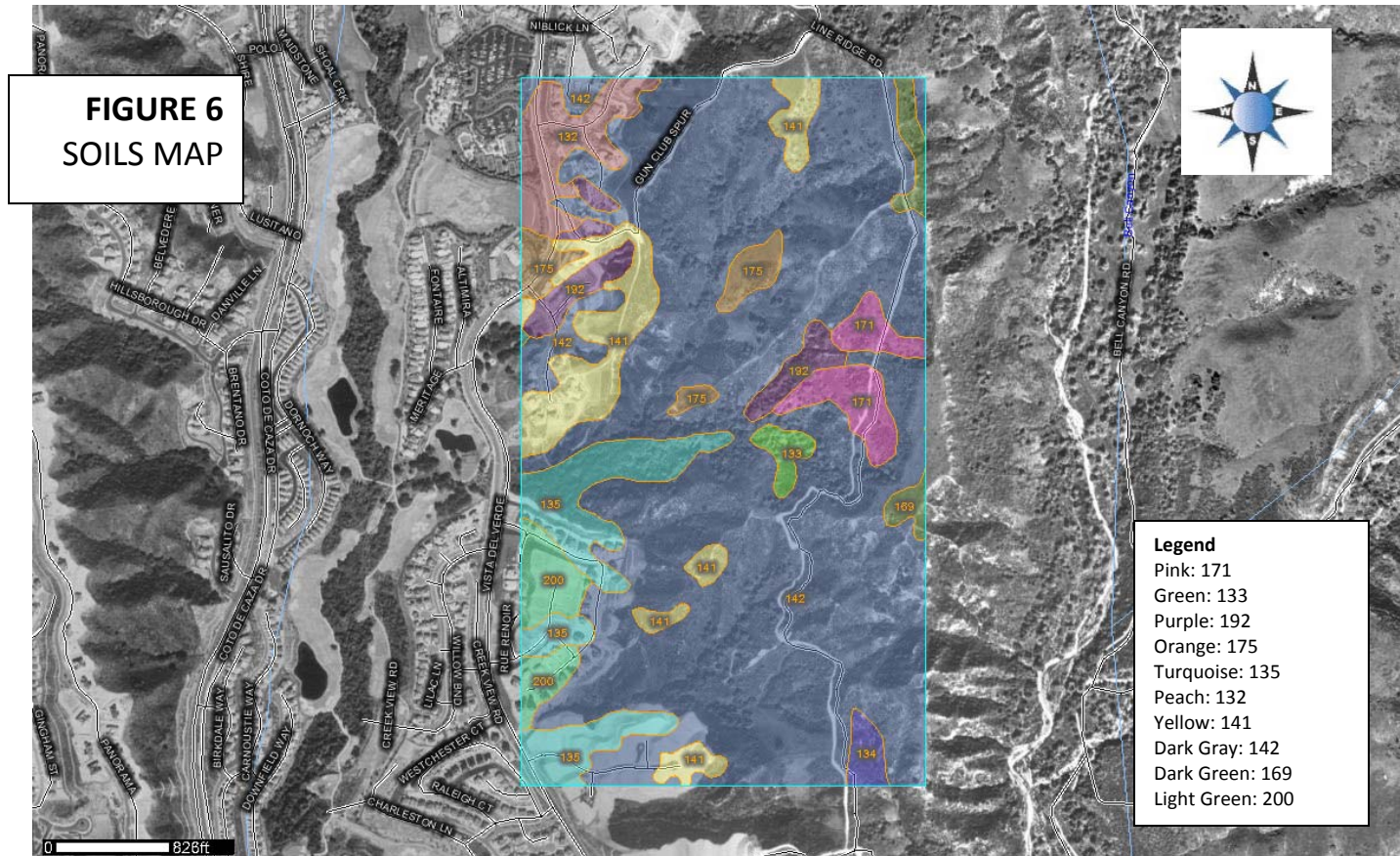
## SOILS

The soil associations mapped for the area are the Cienega-Anaheim-Soper association: Strongly sloping to very steep, somewhat excessively drained and well drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. The soil series mapped for the area are described in Table 1. There no hydric soils listed for the area. The soils found are consistent with the soils mapped for the area.

**TABLE 1**  
**SOIL SERIES MAPPED FOR THE AREA**

Symbol	Name	Description
132	BOTELLA CLAY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 2-9%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
133	BOTELLA CLAY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 9-15%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
134	CALLEGUAS CLAY LOAM, 50 TO 75 PERCENT SLOPES, ERODED	The soils are made up of well-drained soils on uplands, and have slopes of 50-75%. These soils formed in material weathered from lime coated shale or lime coated sandstone, or both. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 13-20 inches, the average annual air temperature is 61 degrees F, and the average frost-free season from 300-350 days. The vegetation is mostly grasses, forbs, mostly mustard and brush.
135	CAPISTRANO SANDY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well drained soils. Slopes are 2-9%. These soils developed in granitic alluvium on alluvial fans and alluvial plains in small valleys of the Santa Ana Mountains and in sedimentary alluvium of the coastal foothills. Elevations range from 25-2,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is about 60 degrees F, and the average frost-free season from 240-340 days. The vegetation is mostly grasses.
141	CIENEBA SANDY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 15-30%. Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
142	CIENEBA SANDY LOAM, 30 TO 75 PERCENT SLOPES, ERODED	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 30-75%. Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from

Symbol	Name	Description
		59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
169	MODJESKA GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 2-9%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.
171	MODJESKA GRAVELLY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 15-30%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.
175	MYFORD SANDY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of moderately well drained soils on marine terraces. These soils developed in sandy sediments. Slopes are 9-15%. Elevations range from 50-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is annual grasses, and forbs, and scattered low growing brush.
192	ROCK OUTCROP-CIENEBA COMPLEX, 30 TO 75 PERCENT SLOPES	Rock outcrop consists of large exposures of sandstone or granite and boulders. Found in mountains or on foothills. It is 50% or more Rock outcrop and boulders and 50 % or less Cieneba soils. The soils are somewhat excessively drained. They formed in material weathered from granitic or sandstone rock. Slopes are 30-75%. Elevations range from 200-4,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is 59-62 degrees F, and the average frost-free season from 200-350 days.
200	SOPER LOAM, 30 TO 50 PERCENT SLOPES	The soils are made up of moderately well drained soils on foothills. These soils developed in weakly consolidated sandstone and conglomerate. Slopes are 30-50%. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is sage, cactus, and brush, and in some areas an understory of annual grasses and forbs.



Source: Orange County and Western Part of Riverside County, California. Soil Data Version 4, Jan 3, 2008  
 Please note that this is an approximate locality map, and should not be used for calculations



## HYDROLOGY

The prevailing gradient of the land in the project area is moderately to steeply sloping terrain that slopes downward in a east-west direction, depending on the location in the landscape.

### Rainfall

The rainfall data is based on isohyetal maps. The 2-year, 24-hour precipitation is 4.5 inches in the project area. The 100-year, 24-hour precipitation is 11 inches in the project area.<sup>7</sup>

### Hydrologic Soil Groups

Soils are classified into hydrologic soil groups (HSG's) to indicate the minimum rate of infiltration obtained for bare soil after prolonged wetting. The HSG's are one element used in determining runoff curve numbers. The infiltration rate is the rate at which water enters the soil at the soil surface. It is controlled by surface conditions. HSG also indicates the transmission rate-the rate at which the water moves through the soil. This rate is controlled by the soil profile. The project site has Group B, C, and D soils.<sup>8</sup>

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

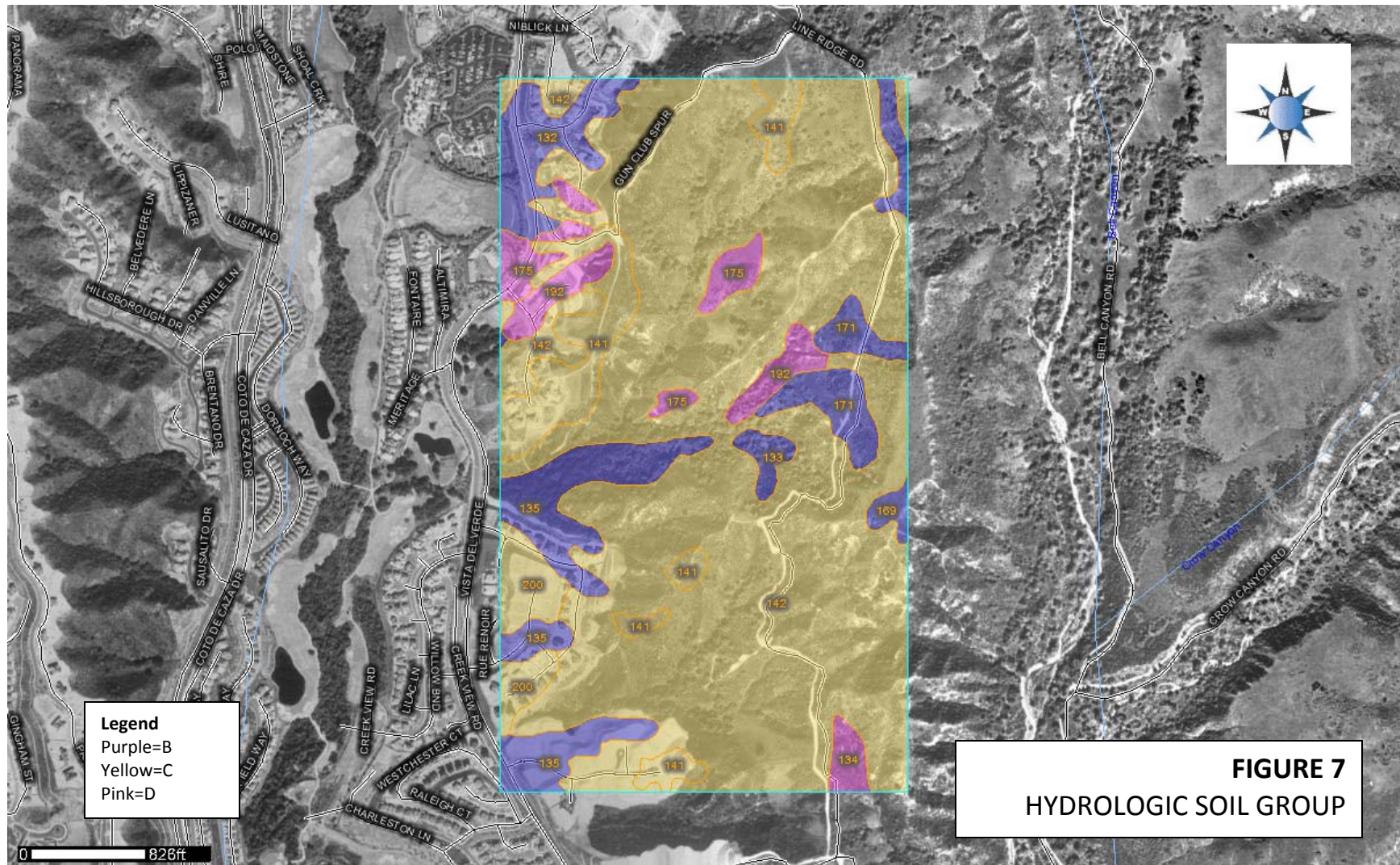
Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

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<sup>7</sup> Orange County Environmental Management Agency, Hydrology Manual. 1986.

<sup>8</sup> Soil Conservation Service. 1986. TR-55.



### Runoff Curve Numbers

The runoff curve number for the project is 48-73. The cover type is brush-weed-grass mixture with brush the major element. The hydrologic condition is good.

### SCS Synthetic Rainfall Distributions

The highest peak discharges from small watersheds are usually caused by intense, brief rainfalls that may occur as distinct events or as part of a longer storm. These intense rainstorms do not usually extend over a large area and intensities vary greatly. One common practice in rainfall-runoff analysis is to develop a synthetic rainfall distribution to use in lieu of actual storm events. This distribution includes maximum rainfall intensities for the selected design frequency arranged in a sequence that is critical for producing peak runoff.

The length of the most intense rainfall period contributing to the peak runoff rate is related to the time of concentration ( $T_c$ ) for the watershed. Different rainfall distributions can be developed for each of these watersheds to emphasize the critical rainfall duration for the peak discharges. The project area is in the Type 1 Rainfall distribution area. Type 1 represents the Southern California Pacific maritime climate with wet winters and dry summers.

Studies by the Soil Conservation Service (SCS) resulted in the following empirical relationship for runoff:

$$Q = \frac{(P - .2S)^2}{P + .8S} \quad (Q = 0 \text{ if } P < .2S)$$

Q= Precipitation excess (runoff) {inches}

P= Cumulative precipitation {inches}

S= Potential maximum retention {inches}

CN= SCS Curve Number

The SCS runoff equation predicts the volume of runoff resulting from a given precipitation depth. The key factor in this translation is the SCS Curve Number.

### SCS Runoff Equation

Studies by the SCS resulted in the following empirical relationship for runoff:

$$Q = \frac{(P - .2S)^2}{P + .8S} \quad (Q=0 \text{ if } P < .2S)$$

Where  $S = \frac{1000}{CN} - 10$

Q= Precipitation excess (runoff) {inches}  
P= Cumulative precipitation {inches}  
S= Potential maximum retention {inches}  
CN= SCS Curve Number

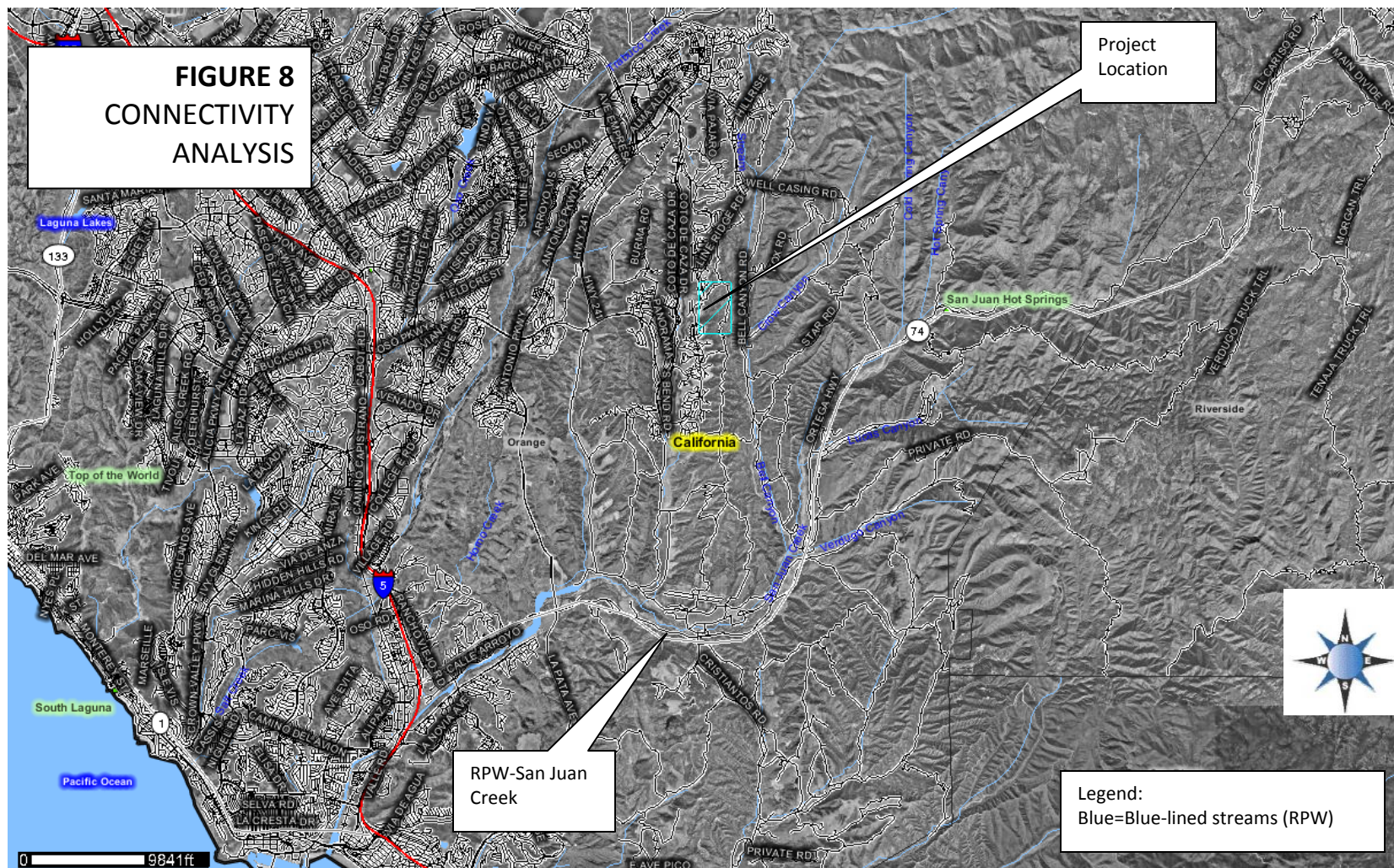
### Time of Concentration

While the SCS runoff equation predicts the volume of runoff, it doesn't specify when the runoff will occur. To determine how the runoff is distributed over time, we must introduce a time-dependent factor. The time of concentration, or  $T_c$ , is commonly used. The  $T_c$  is typically defined as the time required for a particle of water to travel from the most hydrologically remote point in the watershed to the point of collection.

### Project Area Hydrology

Coto de Caza is part of the Upper San Juan Creek watershed system which encompasses a series of southerly draining parallel canyons. Coto De Caza occupies the upper two thirds of the Canada Gobernadora Channel, a secondary watershed system. Because Coto de Caza is located at the head of a secondary watershed system, large amounts of water are not generated before the southern limits of the Community (Coto de Caza) are reached. This situation results in a narrow floodplain and relatively minimal flow hazard within Coto de Caza community when compared to other floodplains within the San Juan Creek system (Coto de Caza Specific Plan). The two drainages on the project site are tributary to Canada Gobernadora Channel. Both drainages show OHWM on the project site. Both Drainage 1 and Drainage 2 meet the Corps jurisdiction requirements on the project site. California Department of Fish and Game and California Regional Water Quality Control Board requirements have been met.





Please note that this is an approximate locality map

## BIOLOGICAL INTEGRITY AND JD ANALYSIS

The JD for the Coto de Caza View Estate Project concerns two unnamed drainages (blue-lined streams) which show no OHWM which are tributary with adequate flow to Canada Gobernadora Channel(Coto de Caza golf course) to San Juan Creek in the County of Orange. Canada Gobernadora Channel, is one of several north south aligned drainages conveying storm and nuisance flows from the Coto de Caza area to San Juan Creek (RPW).

Drainage one is approximately 0.13-river-miles long, and Drainage two is approximately 0.06 mile long. Both drainages display OHWM on the project site. Both drainages enter culverts under Vista del Verde before entering Canada Gobernadora Channel (Coto de Caza golf course). Waters conveyed by Canada Gobernadora Channel hydrologically connect to San Juan Creek (RPW) located approximately 8-river-miles upstream from its confluence with the Pacific Ocean (TNW).

With respect to stream order, both drainages are 1st order drainages. Once flow enters Canada Gobernadora Channel it continues as a 2nd order stream until its confluence with San Juan Creek approximately 3 miles southwest of the proposed project site and becomes a 3rd order stream until its confluence with the Pacific Ocean.

The OHWM varies between 1-6 feet on both channels on the project site. The natural area supports coast live oak woodland habitat. The width of the oak woodland ranges from 20 to 265 feet.

In summary the drainages, (1) are tributary with adequate flow to Canada Gobernadora, one of several north south aligned drainages conveying storm and nuisance flows in the area; (2) supports coast live oak woodland habitat; has an OHWM of 1-6 feet. Based on the above, we conclude that the drainages are tributary to relatively permanent water (RPW) per the Rapanos JD process, and therefore is a water of the United States.

## **FINDINGS**

### **1. Type of Federal Wetland identified:**

**a. Description:** None

### **2. Types of other water identified:**

**a. Description:** Drainage 1 and 2

#### **1. Federal areas:**

Intermittently-exposed, freshwater (circumneutral), Foothill/Terrace Stream Alluvial washes, woodland (*Quercus agrifolia*). Habitat type # 22.1.543.5814<sup>9</sup>.

State= Intermittently-exposed, freshwater (circumneutral), Foothill/Terrace Stream Alluvial washes, Persistent emergent types (*Salvia mellifera*) Habitat type # 22.1.543.5671.

#### **2. State areas:**

Intermittently-exposed, freshwater (circumneutral), Foothill/Terrace Stream Alluvial washes, woodland (*Quercus agrifolia*). Habitat type # 22.1.543.5814.

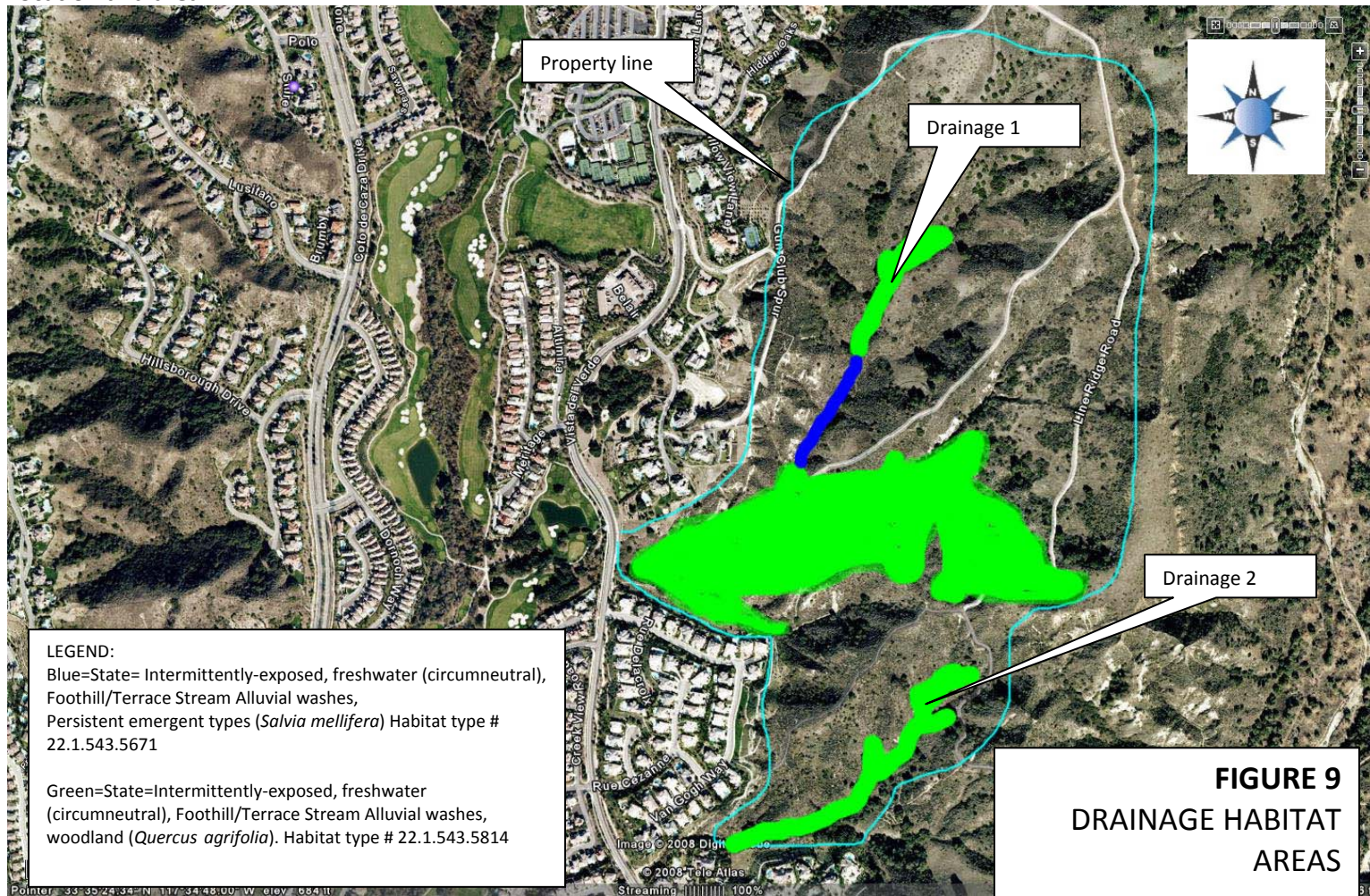
State= Intermittently-exposed, freshwater (circumneutral), Foothill/Terrace Stream Alluvial washes, Persistent emergent types (*Salvia mellifera*) Habitat type # 22.1.543.5671.

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<sup>9</sup> Cowardin, Lewis M., Virginia Carter, Francis Golet, and Edward T. LaRoe. Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, 1979. FWS/OBS-79/31.



## Location and area





**Contrast with non-waters:** The drainage areas are limited by topography and water availability to specific areas. Vegetation differences and bank indicators are clear. The drainages are the low spots in the topography.

**How was the boundary chosen:** The boundary for federal upland/drainage was determined by field examination of habitat, soils, and hydrology. The boundary of the wash was readily determined for the areas by utilizing the ordinary high water mark (OHWM). Jurisdictional area (state) was determined by bank to bank measurements (no dripline on the project site).

Oak woodlands are state jurisdictional. Boundary was the edge of the oak dripline.

**Additional Type of Wetlands/Waters identified:** None

## IV. IMPACTS AND RECOMMENDATIONS

**TABLE 2**  
**POTENTIAL JURISDICTIONAL AREAS WITHIN THE PROJECT**

Jurisdiction	Short Description	Location	Calculations (Jurisdictional Area)	Acreage
State	Edge was measured at drip line of oaks	Drainage 1	(100 feet x 30 feet)+(110 feet x 6 feet)+(90 feet x 6 feet)+(330 feet x 165 feet)+ (75 feet x 265 feet) = 78,525 feet <sup>2</sup>	1.8 acres
Federal	OHW 6"-3'	Drainage 1	(100 feet x 4 feet)+(110 feet x 3 feet)+(90 feet x 3 feet)+(330 feet x 7 feet)+ (75 feet x 8 feet) = 3,640 feet <sup>2</sup>	0.08 acre
State	Edge was measured at drip line of oaks	Drainage 2	(110 feet x 20 feet)+(43 feet x 33 feet)+(65 feet x 22 feet)+(20 feet x 20 feet)+ (45 feet x 40 feet)+(55 feet x 39 feet)+(22 feet x 190 feet) = 13,574 ft <sup>2</sup>	0.31 acre
Federal	OHW 6"-2'	Drainage 2	(110 feet x 3 feet)+(43 feet x 2.5 feet)+(65 feet x 4 feet)+(20 feet x 3 feet)+ (45 feet x 3.5 feet)+(55 feet x 4 feet)+(22 feet x 5 feet) = 1,245 ft <sup>2</sup>	0.03 acre

### Project Impacts and Cumulative Impacts

The construction of the project, based on draft layout plan dated June 18, 2009, will impact both unnamed drainage and associated oak riparian woodland. Federal and State (Table 3) Potential Impact tables are below.

**TABLE 3**  
**POTENTIAL IMPACTS WITHIN THE PROJECT**

Jurisdiction	Short Description	Location	Calculations (Jurisdictional Area)	Acreage
State	Edge was measured at drip line of oaks	Drainage 1	(40 feet x 300 feet) = 12,000 ft <sup>2</sup>	0.28 acres
Federal	OHWL 6"-3'	Drainage 1	No Impacts-area will be avoided by a bridge crossing	
State	Edge was measured at drip line of oaks	Drainage 2	(160 feet x 60 feet) + (140 feet x 120 feet) oak woodland side swell=26,400 ft <sup>2</sup>	0.61 acre
Federal	OHWL 6"-2'	Drainage 2	(18 feet x 4 feet)+(20 feet x 3 feet)+(45 feet x 3.5 feet)+(55 feet x 4 feet)+(22 feet x 5 feet) = 619.5 ft <sup>2</sup>	0.01 acre

### Cumulative Impacts

This project consists of the construction of single family homes, driveways and roadways. Construction of the lots and road will permanently impact 0.01 acre of federal jurisdictional area and 0.89 acres of state jurisdictional areas of the unnamed drainages. To determine if this impact is significant on a cumulative basis, it needs to be considered in the context of existing and future surrounding developments within the area. Cumulative impacts could also result from the marginalization of quality of the streambed habitat in close proximity to the project site by increased human activities near the project site. Nonetheless, the cumulative effects of the proposed project on streambed resources are considered insignificant for the following reasons:

1. The streambed resources on the project site are limited, and their quality is good. Moreover, due to the ephemeral nature of the impacted channel the impacts will be cumulatively non-substantial and localized. Multiplying effects of the impacts may be significant, since there are connecting streams downstream of the impacted area. Avoidance and minimization measures

(moving lots and cut and fill areas out of the stream channel) would greatly reduce the potential impacts.

2. If the project is not constructed, impacts to the existing habitat and streambed within the area, as well as downstream habitats, would not occur.



## V. CONCLUSIONS

Federal jurisdiction utilizes the arid lands criteria "In general, the OHWM for a stream is usually determined through an examination of the recent physical evidence of surface flow in the stream channel. In dryland fluvial systems typical of the desert areas, the most common physical characteristics indicating the OHWM for a channel usually include, but are not limited to: a clear natural scour line impressed on the bank; recent bank erosion; destruction of native terrestrial vegetation; and the presence of litter and debris." State and Federal jurisdiction differ by significant criteria as described above.

### FEDERAL JURISDICTIONAL AREAS

ACOE regulates discharge of fill into "waters of the U.S." including wetlands and non-wetland waters that meet specific criteria. Specific criteria for waters of the U.S. are met for this project. OHWM was observed at both drainages on the project site.

**TABLE 4**  
**FEDERAL JURISDICTIONAL AREAS**

Drainage	Existing Acreage	Existing Linear Feet	Project Impacts	Project Impacted Linear Feet
Drainage 1	0.08 acre	705 feet	0	0
Drainage 2	0.03 acre	360 feet	0.01 acre	160 feet
<b>TOTAL</b>	<b>0.11 acre</b>	<b>1,065 feet</b>	<b>0.01 acre</b>	<b>160 feet</b>

### STATE JURISDICTIONAL AREAS

California Department of Fish and Game, and California Regional Water Quality Control Board regulate impacts to bed, bank, channel, vegetation and waters of the state. Regulated areas include the oak woodland habitat on the project site.

**TABLE 5**  
**STATE JURISDICTIONAL AREAS**

Drainage	Existing Acreage	Existing Linear Feet	Project Impacts	Project Impacted Linear Feet
Drainage 1	1.80 acres	705 feet	0.28 acre	40 feet
Drainage 2	0.31 acre	360 feet	0.61 acre	300 feet
<b>TOTAL</b>	<b>2.11 acre</b>	<b>1,065 feet</b>	<b>0.89 acre</b>	<b>340 feet</b>

**Permits/agreements needed**

The area is under the jurisdiction of the U.S. Army Corps of Engineers, California Department of Fish and Game, and California Regional Water Quality Control Board. Permits/Agreements for activities within the streambed will be required by the California Department of Fish and Game, U. S. Army Corps of Engineers and California Regional Water Quality Control Board. Final authority over the area rests with the appropriate agencies.

U.S. Army Corps of Engineers has requested that the following statement be added to all delineations:

“This delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.”

## VI. REFERENCES

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## VII. APPENDICES

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Data Forms  
Hydrology Calculations  
Rapanos Checklist (JD)